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Counterpunch

making type in the sixteenth century,
designing typefaces now

edited by Robin Kinross

A clear difference of opinion between Claude Garamond (top left) and Hendrik van der Keere (top right). Both punches belong to the same set, originally made by Claude Garamond, which was then modified by Van der Keere. To gain 'efficiency', ascenders and descenders were made shorter: as in the picture of the two p's (here Hendrik is on the left, Claude on the right). But Van den Keere could not resist adding a lowercase m too. It wasn't really necessary for the job, because what was being modified was the space above and below the x-height, and thus line increment. Notice too the remarkable difference in depth of the counters.

6   Letters and the Italian intellect

The first typographic letters seemed to be very formal written letters. This is logical: it could hardly have happened any other way. Gutenberg could never have thought of making letters other than those that looked like formal written letters. His ideal would have been to make type indistinguishable from formal writing. So the goal of typography at first had nothing to do with type or design: it had everything to do with saving time. Producing multiple copies of books faster than they could be written was the point of typography: no more and no less.

Type came to be seen as separate from writing only after about 1500, and this happened mainly in Italy. Although the Italian humanists of that time still saw type as intimately bound up with writing, it is in their work that we can first see the idea of type. And this 'idea' we can call 'design': a strong consciousness of the forms of letters and their disposition on a page. Humanism in Italy had made itself felt before the 1460s, when the first printing presses were established there. But its peak, which we call the Renaissance, coincided with this first flourish of Italian typography.

The influence of these intellectuals on typography is often underestimated. The humanists were the users of print and they defined the premises and assumptions behind typography. These premises were however not much more than an intellectual fashion based on some mistakes. The principal, notorious mistake concerned the minuscule letters ('lowercase' or small letters) which they saw used in classical literature, and which they took as a model and copied. They assumed that this hand was the writing of classical antiquity: but in fact these texts were medieval copies, written in what we call the Carolingian minuscule.

The fashion of the Italian Renaissance entailed an exaggerated

> ## Aldus Manutius Romanus Antonio Codro Vrceo.S.P.D.
>
> Collegimus nuper Codre doctiſſime quotquot habe‐
> re potuimus græcas epiſtolas, eás que typis noſtris ex‐
> cuſas,duobus libris publicamus,præter multas illas Ba
> ſilii.Gregorii,& Libanii,quas cú primum fuerit facul‐
> tas, imprimendas domi ſeruamus.Auctores uero ,quo
> rum epiſtolas damus, ſunt numero circiter quíq; & tri
> ginta , ut in ipſis libris licet uidere.has ad te , qui & lati‐
> nas & græcas litteras in celeberrimo Bononiéſi gymna
> ſio publice profiteris, muneri mittimus,tum ut a te di
> ſcipulis oſtédantur tuis,quo ad cultiores litteras capeſ
> ſendas incendantur magis,tum ut apud te ſint Aldi tui
> μνημόσυνον & pignus amoris. Vale Venetiis quinto‐
> decimo calendas maias M.ID.

6.1 A colophon from one of Aldus Manutius's books. The type, cut by the Italian punchcutter Francesco Griffo, is one the most important humanist romans – and the model for Monotype Bembo. (Epistolea, Venice, 1499.)

6.2 The minuscule (left) was adopted by the humanists and they 'improved' it: made it look lighter and gave it a double serif, translating it into printing type (right). But can anyone really write these letters? They don't appear in any of the famous writing books.

desire to emulate and imitate what was imagined to be classical antiquity. The Italian humanists did not take tradition as given, but made up their own variations on it. They certainly respected the culture of classical antiquity, but considered themselves superior to it. The humanists started to improve on antiquity in everything: architecture, sculpture, painting, writing, and they improved on its letterforms as well. Imagined superiority has to have somewhere to manifest itself. These improvements are really artificial additions, rather than developments occuring as part of a long evolving tradition.

Now take this sample of printing [6.1]. Even without knowing the title of the book from which it comes, we know that this must be a humanist text. Why? Because it uses the new letters. Or more exactly: the letters that these modern humanists imagined were a real product of classical Roman antiquity, but then improved to become better than the work of those ancients.

These humanist letters present us with a puzzle: a double serif pasted onto the minuscule [6.2]. If we want to solve this mystery we have to go on examining and worrying about what happened in Italy in the years between 1460 and 1500. Harry Carter puts it like this: 'The humanists' copying hand used for the classics had reached a very high polish by the time that printing was introduced to Italy, and scholars and architects were much concerned with collecting epigraphs from ancient Roman monuments and *thinking out rules* for reproducing the lettering.' And, quoting from one of the protagonists: 'Erasmus had a decided and declared preference for Roman letters, as might be expected. He praised "a handwriting that is elegant, clear, and distinct, representing *Latin words by Latin elements*".'[*] This tells us gently something about the climate of humanist opinion on letters. I could put it more crudely. The Italian humanists were modernists interested in the new. They wanted something different. They felt they were better than ever before in

[*] Carter, *A view of early typography*, pp.70, 78; the italics are mine.

Eques autem est qui equo sedet in armis. Equester uero locus uel ordo. ut si dicas ille honor equestris e. Item militat ille equestri ordine & equester adubimz. Nter Curialem & Curulem. Curiales officiales pu blici. Curules uero felle in quibus magistratus se dentes & iura reddunt. Nter Censorem & Censualem. Censores uero Judi ces uocantur. Censuales uero officiales qui censuz prouincialem exigunt. Nterum & Censorium hominem pulchrum dicun.

6.3 An ordinary minuscule written in Italy in the fifteenth century. The scribe just wrote it, without too much effort. Nowadays this looks rather messy, but it is still very legible. This quality of writing was common practice before the invention of typography.

De Confirmandis. 3

Spiritus sanctus superueniat in vos, &
virtus Altiffimi custodiat vos à peccatis.
℞ Amen. *Deinde signans se manu dextra a fronte ad pectus signo Crucis, dicit:*
℣ Adiutorium nostrum in nomine Domini.
℞ Qui fecit cœlum & terram.
℣ Domine exaudi orationem meam.

6.4 Writing by Nicolas Jarry in France, from 1651, makes a clear contrast with 6.3. A page like this could not have been 'written' without the model of printed pages.

every department of culture. So their scribes – essential people who wrote down and made the new culture manifest – began (rather suddenly) to abandon old, heavy scripts, and to make a new one that breathed the new mentality. The rest of Europe was impressed, and the world still seems to have unconditional admiration for what we call the Italian Renaissance.

Looking at the humanist manuscripts, they do look typographic. We wonder which came first, these letters or the printed ones? Even just the space between the lines, or the line increment, seems familar to us. It is what we do with lines of type. So we admire these beautiful pages of typeset-like writing, which reach their peak a hundred or so years later on [6.4], in the cases of museums or in the pictures of books about writing. This is a view from a distance.

These humanist letters are often made of bits and pieces glued together, with great pain. They balance on the border between writing and drawing. In his desire to rationalize even the minuscule into geometric form, the scribe had to do battle with the natural or bodily conditions of writing.

The pure roman is a broken script, consisting mainly of straight penstrokes that stand at 90 degrees to the baseline. This stroke looks rather simple, but it is one most difficult strokes to make. To make it easier to execute this stroke, a scribe could do three things. First: thicken up the stroke. And then: put strokes close to each other, using the previous one as a reference and guideline. Third: avoid the niggling question of straightness by reducing the straight middle part as much as possible [6.5]. Then you end up

easy   *difficult*

6.5 Before typography, text was often written in rather fat 'wavy' hands, for practical and economic reasons.
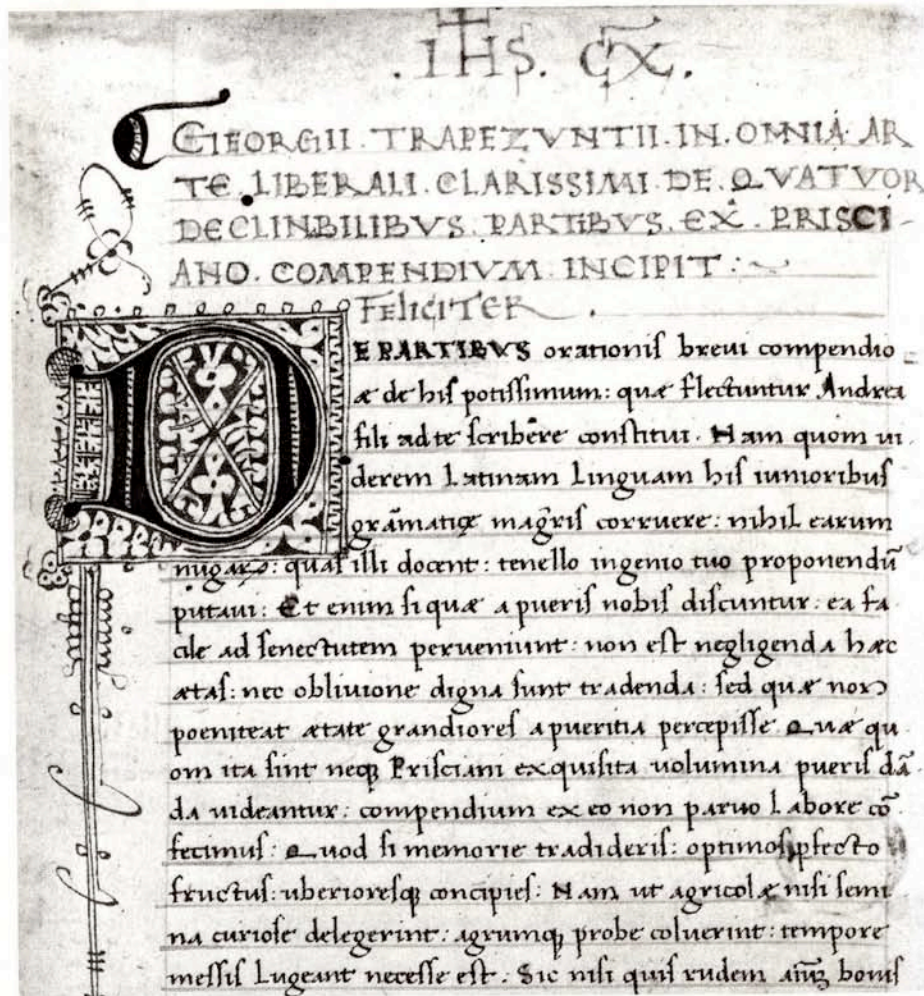
6.6 *This manuscript (from Ferrara, 1475) shows a strange mixture of elements: medieval guide-lines, humanist capitals, considerable space between the lines, a rather light overall colour in the text-block. Even the letters themselves present a mixture of gothic cursive with a light, open humanist minuscule. The ingredients are blended together smoothly. In theory such a mix should not exist. But one finds it often in manuscripts from that time.*

with a rather bold, narrow script: a script that cannot be described as being built up out of Latin elements, as Erasmus had in mind. Certainly for writing bulky texts in reading sizes these 'tricks' are very practical and they were applied for centuries, until questioned by the humanist taste for light and openness.

Pure, formal written romans are rare if not unknown before 1500. By about that time it seems that typography forced the scribes to become more ordered and coherent. One can find common procedures. But if you look at manuscripts from between about 1450 and 1500, it seems that Italian formal writing was in confusion: each scribe had his own way of forming characters. For this research, you need to look further than the handful of specimens of humanist script that decorate our 'history of printing type' books.

For example, look at this piece of writing [6.6]. It looks humanistic. And it is that, in part. But, looking closer, you see a
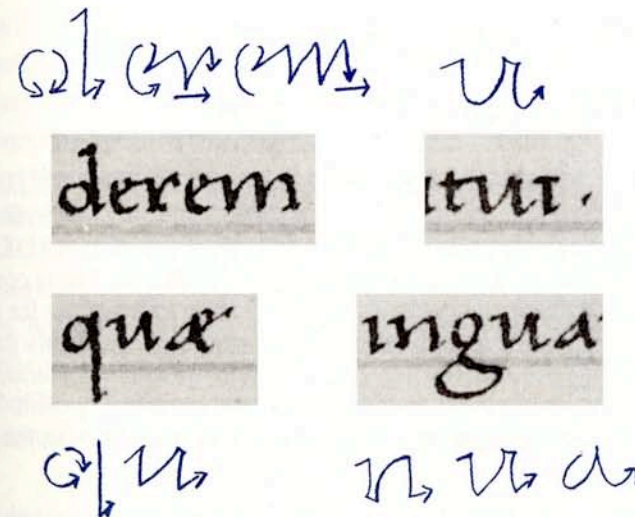
6.7 *Details of the manuscript shown in 6.6. We can distinguish three approaches to the formation of letters: gothic cursive (m, n, u); italic (e, a); and humanist broken construction (d, q, g).*

mixture of different worlds. There are the typical Renaissance Roman capitals. The layout is humanist: rather light in colour, generous space between lines. The weight of the small letters is also on the light side. But the drawn guidelines for the text are a medieval practice; so too is the Lombardic capital D.

The small letters offer a nice riddle. Some characters are pure humanist minuscules: p, d, q, b, g. But if we look at h, n, m, u, and especially r, we see a true gothic cursive: the very opposite of the light and open humanist minuscule [6.7]. All these ingredients are mixed and made into a well-balanced unity. According to schematic history, this manuscript cannot exist. But in fact it is no exception. The world of writing had great freedom before 1500.

The humanist pages that we are most familiar with were written around 1500, by which time the typographic roman was well on its way in intellectual circles. Typography had then begun to prod

Queſtio quinta de magia natu rali et cabala hebreorum.

Uarta concluſio per iſtos dānata fuit bec. NULLA EST SCIENTIA QUE NOS MAGIS Cer LIFICEL DE DIUINILALE CHRISLI QUAM MAGIA EL CABALA. banc conclu ſioné ego declarando dixi q̃ inter ſciétias que ita ſunt ſciétie q̃ neq̃ ex modo procedendi.neq̃ ex ſuis princi piis. neq̃ ex ſuis cõcluſionibus innituť reuelatis. nul la eſt que nos magis certificet eo mõ quo de boc certificare poſſut ſcien tie bumanitat⁹ inuente q̃ magia illa de qua ibi ponuť cõcluſiones aue

6.8 At first Italian humanists had to use what was available, such as this rotunda for texts by Giovanni Pico della Mirandola. The typical humanist minuscule took at least 30 years of experiment before the standard was set by Aldus Manutius. (Apologia, Naples, 1487.)
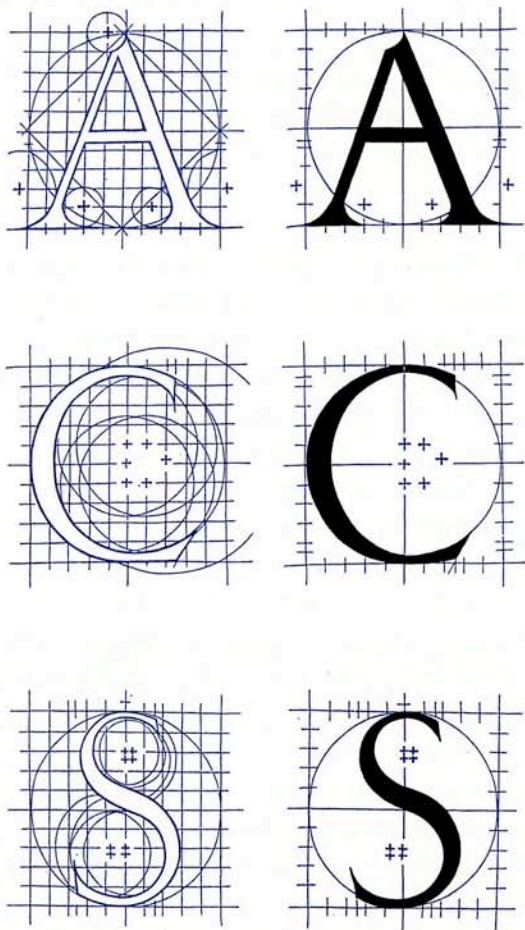
the Italian scribes in their back: 'show me what you can do!'. If it was true that 'typical humanist script' was very common in 1450, then we might believe the story that roman type evolved from humanist handwriting. But it didn't seem to happen quite like that. The typical humanist manuscript pages show up too late: by thirty years or so.

One has to assume that the humanist scribes, and the intellectual elite behind them, hardly knew how they wanted their letters to look. It took them quite a while to solve the problems of constructing their desired letters – supposing that these problems could be ever be solved. So, by the time that their preferred or even their own texts were going into print, they had not been able to set a clear standard in letters, such as had been provided by textura and rotunda. They had to make do with what was available [6.8]. And the scribe's doubts and indecision led to a gap between written letters and their typographic representation. Type design was born.
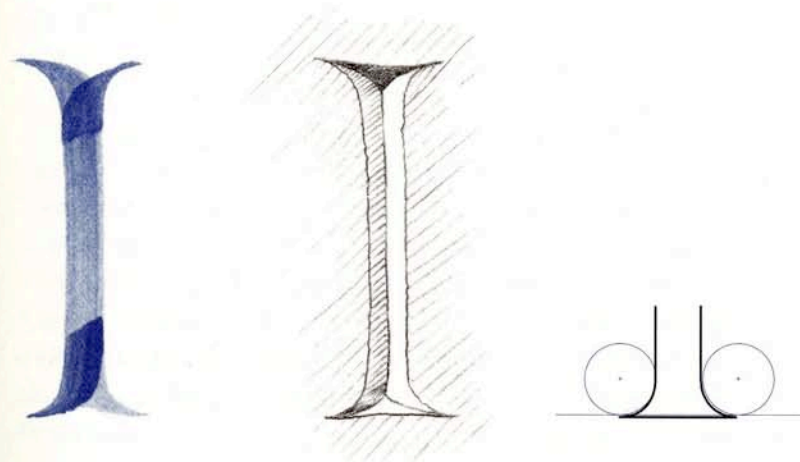
In the climate of Italian humanism it was possible to come up with strange, super-rational creations. Reason was followed at any cost. The Roman capital letters were accepted into writing and type without great changes. These letters were rationalized by the geometrical schemes of Felice Feliciano, Luca Pacioli, and the others we are familar with [6.9]. Such schemes tell us more about humanism than they tell us about designing usable letters.

The capital serif can be explained by a baseline, a straight vertical stroke, and two circles [6.10]. How pure! The minuscule serif is too organic, too much part of the main stroke, to be so easily rationalized. Nevertheless this capital serif was preferred over the easier, more fitting miniscule serif, and pasted onto the miniscule stem. It was symmetrical and logical: logical and symmetrical was it!

This drawing-board or even armchair thinking gave the scribe big problems. The rational approach to the minuscule and the bodily conditions of implementing this approach were in conflict with each other. This must be the reason for the scribes not being able to set any formal standard that could be followed in typography.

6.10 *The Roman capital: how it was written with a flat brush in Antiquity (left), what the Romans did to preserve it in stone (middle), and how the humanists of Renaissance Italy explained this form to themselves (right). In humanist eyes, a symmetrical serif was mathematically 'truer', and thus superior to the minuscule serif of 6.5.*

6.9 *A nice image with an air of confidence, made by Albrecht Dürer. However, such diagrams do not really tell us much about capital letter-forms in use. The proportions given in these schemes could not be applied to printing type. The real value of such drawings is in telling us something about humanist mentality: the attempt to get a grip on form by describing it mathematically.*

inmhulocdqe
apbrsgfffftttt

6.11 *A highly rationalized twentieth-century hand (in this case, written by Jan Tschichold). Such writing has acted as a kind of filter, through which we view its humanist sources.*

But ways were found, because the intellectually beautiful result was more important than the making. We need to adjust our conception of the humanistic minuscule. We tend to imagine it as in illustration 6.11; but 6.12 shows (it is a little exaggerated) the ideal that some late fifteenth-century scribes were working towards. The reality lay between these two extremes. Meanwhile, printing was getting started, with the help of goldsmiths, some of whom began to specialize in making punches for type: the punchcutters. By contrast with the difficulties that the symmetrical serif gave to scribes, the punchcutters managed to make it easily enough. They just did it, like they could do anything in steel: portraits, buildings, landscapes... So these new-fangled letters were no more than another job for the punchcutter.

conclusione ego declarando dixi

6.12 Four centuries were needed, before the humanist ideal could be realized in the German Weimar Republic. To make avant-garde modernist letters, all that the fifteenth-century scribes would have had to have done was take a really big quill – a tube with 'walls' 0.5 mm thick – and then to cut a point as wide as this thickness, so that the width was as great as its height: a 'broad nib' with a square point.

7 The place of the punch in type production

The first movable types were cast in lead. The letterform – the typeface – that was finally printed on paper was defined by the punch. The men who cut the punches were the designers of typefaces. Though 'design' in our modern sense of planning, and drawing-as-instruction, had not then begun. And, for reasons explained in this book, design in this sense could not happen in cutting punches by hand.

Punches stand near to the start of the long process of making type and typefaces. The whole process is shown in the engravings reproduced inside the flaps of this book, and some detailed annotations are given there. This little chapter may serve as a reminder of this process:

a punch was cut
a matrix was struck with the punch
this matrix was justified and placed in a mould
molten lead was poured into this mould
the piece of type was taken out
unnecessary material was removed from the type
it was brought to a uniform height
the type was set
the type was inked and printed
the image of the type (the typeface) could be seen on paper

8   The punchcutter and the historians

The people who made punches – the punchcutters – defined the final and visible forms of the typeface: forms that have been handed down to us and are often essentially unchanged today. Since the time when the typefaces we regard now as classical were first cut, the use of type has only increased. And now, with digitization, new devices and more producers, type has begun to be used more intensely and more widely still.

Punchcutting has never been sufficiently taken into account by the historians of typography. I suspect it has been seen too much as just a matter of manual dexterity. The notable exception here is the research done at the Plantin-Moretus Museum in the 1950s by Harry Carter, H.D.L. Vervliet, Matthew Carter, Mike Parker, and others. Their primary goal was to identify types and makers, and to restore punches. This research slowed down in the 1960s, as these people moved on to other things. But now, through their efforts, as well as through the work of the Museum's own staff, there is a place where, after making just a phone call for an appointment, you can handle this material and study it. We can be very grateful for this.

These researchers were often able to identify type; but, at least in what they wrote for publication, there is not much discussion of the process of making punches. So when Mike Parker looked at the form of a punch – the physical character of the whole thing – he was able to tell us when it was made and who made it. (Differences between punches are often striking; so perhaps this is not such a remarkable observation.) But how and why the forms of the punches, and the characters on the face of them, were as they were – that was hardly touched upon.

So the literature about the craft of punchcutting is very limited. For the most part, it consists of facts found in archives, discussion of these facts and debates with the previous writers on the subject. The result is that all the facts are put more exactly into chronological order. But the main questions – my main questions, at least – remain unanswered. What exactly is punchcutting for type? How did these men think about letterforms? What made them think that way? In short, what were or what could have been the designers' intentions? None of the historians answer these questions sufficiently. At most, there may be a paragraph or so: not much in comparison with the rest of the discussion. The punchcutter is constantly surrounded by foggy clouds of admiration. It is as if these writers are saying to us: 'Here are these facts, drink them in, and then take them for granted. But please don't ask for anything else, because we experts have no answers.'

The only works on punchcutting that have living value for us, as well as their purely historical importance, are the books by Fournier and by Moxon. These, together with some punches and matrices, are essentially all we have. (One could mention the information scattered in marginal notes and essays, by punchcutters or typefounders such as Fleischman, Breitkopf, Edward Prince, P.H. Rädisch.) Both Fournier and Moxon can be obtained with a little persistence in good editions. Both leave many questions unanswered. As already explained in chapter 1, the only thing I could do to find answers was to cut punches myself, to make the experience my own, and then work backwards to what lies behind the practice. So a main purpose of this book is to give a thorough explanation of punchcutting, its history, different traditions, its precision, and its effect on type design. Then the foggy clouds of admiration may be lifted.